REMARKS

Claims 1, 27, and 44 are amended to recite that the composition "consists of" rather than "comprises." Claims 1-24, 26-28, 30-34, and 43 are pending. Claims 44-46, 48, and 49 are withdrawn. For at least the following reasons, reconsideration of the claims is respectfully requested.

At page 5 of the Office Action, in a response to Applicants' arguments regarding Sutton, the Patent Office indicates the claims as written encompass a wide range of compositions, although no objection has been made under 35 U.S.C. §112 for indefiniteness. The terms cited by the Patent Office, "microsphere," "substrate," "coating aid," and "gelling agent," are known in the chemical and biological arts, and are defined in the specification, which further includes examples of each. These terms are given meaning in context of the claims, which are directed to a composition for making a microarray, a microarray, or a method of forming a microarray. Use of a microsphere, substrate, coating aid, or gelling agent in a microarray inherently narrows the possibly range of interpretation of the given terms, and clearly excludes, for example, the examples of the Patent Office of cookie dough or a cultured Petri dish, because these examples are not microarrays. Applicants remind the Patent Office that the claim should be read as a whole, and terms therein should be read in the context of the claim.

35 U.S.C. §102(b) over Sutton

Claims 1-8, 13, 15-17 and 21 are rejected under 35 U.S.C. §102(b) over Sutton, US Patent 5,714,340. In the response to arguments on pages 4 and 5 of the Office Action, the Patent Office asserts Applicants' claimed invention is taught by Sutton because the claimed invention is directed to a microarray that comprises a single layer of microspheres, and "comprising" is an open ended term, such that a multi-layer structure would comprise a single layer structure. For at least the following reasons, Applicants traverse the rejection.

Applicants herein amend claim 1 for specificity to recite a microarray "consisting of a single layer of microspheres randomly dispersed with a uniform density in a fluid on a substrate." As discussed in the specification and

shown in the Figures, Applicants' invention consists of only a single layer of microspheres. Sutton does not teach or disclose a single layer of microspheres.

Sutton is directed to an immunoassay element for assaying ligands, wherein the element includes a layer containing a labeled ligand, a bead spreading layer, a cross-linked hydrophilic polymer layer including receptors, and a support. Neither the beads of the bead spreading layer nor the receptors of the cross-linked hydrophilic polymer layer can be compared to the microspheres of the claimed composition of claim 1.

The beads of the bead spreading layer of Sutton, as shown in Figure 1, form a stack comprising multiple layers of beads. In contrast, the claimed invention consists of a single layer of microspheres on a substrate.

The receptors shown in Figures 3-5 and discussed at col. 10, lines 3-11, of Sutton form clusters in the cross-linked hydrophilic polymer layer. In contrast, the claimed invention is directed to microspheres that are randomly dispersed with a uniform density on a substrate, as explained and exemplified in Example 2, at page 11, lines 21-28, of Applicants' specification. The clustered receptors of Sutton are not randomly dispersed with a uniform density, as claimed by Applicants. Further, as shown in Applicants' Example 2, without use of the claimed invention, streaking can occur in the coating, wherein the streaking corresponds to aggregates of microspheres on the substrate, such as those found in Sutton et al.

Sutton et al. does not teach all the elements of the claimed invention. For example, Sutton et al. does not teach at least a composition consisting of microspheres in a single layer randomly dispersed with a uniform density on a substrate. For at least the above reasons, reconsideration and withdrawal of the rejection are in order and are respectfully requested.

35 U.S.C. §102(b) over Pierce

Claims 1-24, 26-28, 30-34, and 43 are rejected under 35 U.S.C. §102(b) over Pierce, US Patent 4,258,001. In the response to arguments on page 9 of the Office Action, the Patent Office asserts Applicants' claimed invention is taught by Pierce because the claimed invention is directed to a microarray that comprises a single layer of microspheres, and "comprising" is an open ended term,

such that a multi-layer structure would comprise a single layer structure. For at least the following reasons, Applicants traverse the rejection.

Pierce does not teach, disclose or suggest the subject matter of the claimed invention as set forth in the cited claims. Pierce is directed to an element for analysis or transport of a liquid, wherein the element includes particles with an adhesive surface forming a three-dimensional structure. This is exemplified in Figures 2-14, cited in the Office Action as exemplary of the Pierce et al. teaching. As stated at col. 6, lines 49-51, of Pierce, formation of a coherent, three-dimensional lattice by organopolymeric particles is "an essential feature of the invention."

Applicants' invention, as set forth in independent claims 1 and 27 and the claims dependent therefrom, consists of a single layer of microspheres randomly dispersed with a uniform density on a substrate. Pierce does not teach, disclose, or suggest a single layer of microspheres having a uniform density. In fact, Pierce teaches away from two-dimensional structures, stating that a three-dimensional lattice is an essential feature of the invention at col. 6, lines 49-51. For at least the above reasons, reconsideration and withdrawal of the rejection are in order and are respectfully requested.

35 U.S.C. §102(e) and statutory double patenting over Chari

Claims 1, 2, 4, 9-12, 15-17, 21-23, 26-28, 30, 31, 33, 34, and 43 are rejected under 35 U.S.C. §102(e), and for nonstatutory double patenting, over Chari, US Patent 6,599,668. The Patent Office asserts Chari discloses a coating composition comprising a single layer of microspheres randomly dispersed in a fluid containing a coating aid and a gelling agent. For at least the following reasons, Applicants traverse each of these rejections.

Chari does disclose coating a composition comprising a single layer of microspheres randomly dispersed in a fluid as one step in a process of forming *a color filter array*. The color filter array prepared by the process described in Chari is used for photography, specifically for selectively transmitting light of a particular color, as recited at col. 3, lines 43-45.

Applicants invention is directed to a coating composition for a microarray (claim 1), and a microarray (claim 27). Applicants note the claims to a

method of making a microarray (claims 44 and 49) are not rejected. As known to one skilled in the biological and chemical arts, a microarray is a device used for research and development in biological and chemical fields of study. The microarray provides 2-dimensional support surface on which reactions can be conducted, observed, and identified. The microarray surface can be labeled or tagged to promote certain reactions on or attachments to the surface of the microarray. This is described in detail, and with reference to various articles and patents, in Applicants' Background of the Invention, pages 1-2 of the specification. Applicants note the Patent Office appears to be familiar with the term "microarray" because of the group art unit to which this application was assigned, and because the Office Action at page 5, while indicating other terminology in the claims is broad in scope, does not indicate the term "microarray" is broad.

The claims must be read to include all necessary terms. The term "microarray" is necessary and definitive in independent claims 1 and 27, and all claims dependent therefrom. References must be read for all they teach. Chari teaches a color filter array for use in color photography. As known to those skilled in the arts of biological research and photography, a microarray and color filter array are not related and are not interchangeable, each having very different technical requirements. Chari is not directed to the same field of art as the claimed invention. Even if the color filter array of Chari is made using similar materials to the Applicants' microarray, the use of such materials in a microarray is not taught by Chari, and would not be obvious. One skilled in biological and chemical research would not look to photographic devices to devise a microarray because of the differences in use and technical requirements.

Applicants claims a composition for forming a microarray and a microarray. Chari discloses and claims a process of forming a color filter array. Use of similar materials for a different purpose in a disparate field of art does not anticipate or make obvious Applicants claimed invention.

For at least the above reasons, reconsideration and withdrawal of both the rejection under 35 U.S.C. §102(e) and the nonstatutory double patenting rejection are in order and are respectfully requested.

For at least the above reasons, Applicants submit all of claims 1-24, 26-28, 30-34, and 43 are in condition for allowance. Further, because process claim 44 includes all the features of claim 1, and claim 49 depends from claim 1, rejoinder, consideration, and allowance of currently withdrawn claims 44-46, 48, and 49 are respectfully requested. Prompt and favorable action in the form of a Notice of Allowance of all claims 1-24, 26-28, 30-34, 43-46, 48, and 49 are respectfully solicited.

If the Examiner has any questions, the Examiner is invited to contact Applicants' undersigned representative.

Respectfully submitted,

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If the Examiner is unable to reach the Applicant(s) Attorney at the telephone number provided, the Examiner is requested to communicate with Eastman Kodak Company Patent Operations at (585) 477-4656.